



Maine Department of Environmental Protection

Bureau of Land & Water Quality

O&M Newsletter

September 2007

A monthly newsletter for wastewater discharge licensees, treatment facility operators, and associated persons

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PPCPs and You

Until I attended the recent Northeast Water Science Forum in Portland, I didn't know what PPCPs were either. After two days of presentations and discussions, I have been enlightened on the fate of all those Pharmaceuticals and Personal Care Products (PPCPs) that we consume and dispose of. Not

surprisingly, they end up in our environment, our surface and groundwaters, and often in our water supplies and into our bodies. Along the way, those first and most affected are the aquatic plants, fish and animals.

Some of the most persistent and pervasive of these "emerging contaminants" in our waters are caffeine, acetaminophen, anti-depressants and "endocrine disrupting chemicals" found in hormone and steroid prescriptions. The endocrine disruptors have had the most observable impacts, including an increase in the number and percentage of both female and intersex fish. Intersex fish tend to be males exhibiting female characteristics. In the case of fat-head minnows, this has resulted in a marked decrease in head size and color of many males, as well as reproductive disruptions.

In response to these emerging threats to our environment, the State of Maine is developing a return program for unused pharmaceuticals, and several states are considering refund programs for pill bottles to encourage proper disposal of unused drugs and medications.

The conference brought together a diverse mix of environmental scientists, engineers, biologists, toxicologists and industry representatives, with a variety

of views and concerns regarding this emerging issue. I'm sure this is not the last we'll hear about PPCPs, but at least you'll know the meaning of this new acronym and these emerging contaminants.

For more information these emerging issues and contaminants, check out: www.epa.gov/ppcp. An archive of the presentations from the 2007 Conference can be found at www.neiwpcc.org/ppcpconference.

Chuck Rossoll

Fall 2007 Exams

The next wastewater operator certification exam will be given on November, 14, 2007. The deadline for mailing you application is September 14, 2007 or hand deliver it to JETCC by September 28, 2007.

For Practice

1. Which laboratory test should be used to analyze grit to determine the effectiveness of a grit removal system?
 - a. Percent total solids
 - b. Percent total volatile solids
 - c. Total settleable solids
 - a. Total suspended solids
2. The brake horsepower rating of an electric motor is less than the motor horsepower of the same motor because.
 - a. A motor is not 100% efficient
 - b. A pump is more efficient than a motor
 - c. A pump is not 100% efficient
 - d. The specific gravity of water is greater than 1.0

3. To determine the amount of organic material in wastewater, you should run...
 - a. the pH test
 - b. the residual chlorine test
 - c. the BOD test
 - d. the total suspended solids test
4. The best way to manage hazardous waste is...
 - a. Storage
 - b. Treatment
 - c. Disposal
 - d. Source Reduction

Approved Training

September 25, 2007 in Bangor, ME – Backflow Prevention and Cross-connection Control – Sponsored by MRWA – Approved for 4 hours

October 3, 2007 in Kittery, ME - Backflow Prevention and Cross-connection Control – Sponsored by MRWA – Approved for 4 hours

October 3&4, 2007 in Yarmouth, ME – Laboratory Procedures w/NEWEA Exam – Sponsored by NEIWPCC – Approved for 9 hours

October 3, 2007 in Bangor, ME – Basic Water System Hydraulics – Sponsored by MRWA – Approved for 4 hours

October 4, 11, 18, 25, Nov 1 & 8, 2007 in Augusta, ME – Basic Wastewater Treatment – sponsored by JETCC – Approved for 24 hours

October 18, 2007 in Fairfield, ME – Erosion Control – Sponsored by MRWA – Approved for 4 hours

October 23, 2007 in Portland, ME –
Applying Process Control Techniques to
WWTF Operations – sponsored by
JETCC – Approved for 6 hours

October 24, 2007 in Presque Isle, ME –
Pump Rebuild and Maintenance
Workshop – sponsored by JETCC –
Approved for 6 hours

October 24, 2007 in Bangor, ME –
Water Chemistry and Treatment
Chemicals – Sponsored by MRWA –
Approved for 4 hours

October 30, 2007 in Bangor, ME –
Basics of Electricity, Arc Flash
Protection – sponsored by NEIWPCC –
Approved for 6 hours

October 31, 2007 in Caribou, ME –
Water Chemistry and Treatment
Chemicals – Sponsored by MRWA –
Approved for 4 hours

November 7, 2007 in Presque Isle, ME –
QA/QC of Laboratory equipment with
Review of new *E. coli* methods –
sponsored by JETCC – Approved for 6
hours

November 7, 2007 in Caribou, ME –
Basic Water System Hydraulics –
Sponsored by MRWA – Approved for 4
hours

November 8, 2007 in Presque Isle, ME –
Wastewater Laboratory Analysis issues
– sponsored by JETCC – Approved for 6
hours

November 15, 2007 in Saco, ME –
Effective Management Practices for
Supervisors and Operators – sponsored
by JETCC – Approved for 6 hours

November 27 or 28, 2007 in Gardiner,
ME – Arc Flash CMP Electrical
Safety/BLS Inspection – sponsored by
JETCC – Approved for 6 hours

December 4, 2007 in Brunswick, ME –
Pump Station Retrofits and
Troubleshooting – sponsored by JETCC
– Approved for 6 hours

December 6, 2007 in Waterville, ME –
PVC Valves and Joining Overview–
sponsored by JETCC – Approved for 6
hours

December 12, 2007 in Winthrop, ME –
Mixerology 101– sponsored by JETCC –
Approved for 6 hours

Note: JETCC stands for Joint
Environmental Training Coordinating
Committee – PO Box 487 –
Scarborough, ME 04070-0487 – Tel
(207) 253-8020

Efficiency Maine is a program of the
Maine Public Utilities Commission - 18
State House Station, Augusta, ME
04333-0018
Tel: 207-287-8350

MRWA stands for Maine Rural Water
Association - 14 Maine Street, Box 36 -
Brunswick, ME 04011 – Tel (207) 729-
6569

NEIWPCC stands for New England
Interstate Water Pollution Control
Commission – 116 John St. – Lowell,
MA 01852-1124 – Tel (978) 323-7929

Answers to For Practice:

1. b If the total volatile solids is high, the grit chamber is removing too much settleable material. Grit chambers should remove mostly non-volatile solids. Volatile solids are normally less dense than non-volatile solids and should not settle in the grit chamber.
2. a No motor can convert all of the electrical energy input to mechanical energy output. Some of the energy is lost to heat and is not available to do the work of the pump, moving a fluid against a pressure head.
3. c The BOD test is the best of the listed methods to determine the amount of organic matter in a water sample. Bacteria will use the organic matter as food and consume oxygen. By measuring the amount of oxygen used, you can estimate the amount of organic matter present.
4. d Reducing the amount of hazardous material used in a process is always better than having to handle, treat and dispose of that material.

